

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/079299 A3

(51) International Patent Classification⁷: **C12Q 1/68**,
A01N 43/04, C07H 21/04, A61K 31/07

(21) International Application Number:
PCT/US2005/004409

(22) International Filing Date:
14 February 2005 (14.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/543,880 12 February 2004 (12.02.2004) US
60/551,558 9 March 2004 (09.03.2004) US

(71) Applicant (for all designated States except US): **NEW ENGLAND BIOLABS, INC.** [US/US]; 32 Tozer Road, Beverly, MA 01915 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TZERTZINIS, George** [GR/US]; 10 Worcester Street, #2, Cambridge, MA 02139 (US). **PETIT, Céline** [FR/FR]; 2, rue Roger Maréchal, F-62320 Acheville (FR).

(74) Common Representative: **STRIMPEL, Harriet, M.**; New England Biolabs, Inc., 32 Tozer Road, Beverly, MA 01915 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
4 May 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGHLY POTENT hsiRNA MIXTURES AND METHODS FOR GENE SILENCING

(57) Abstract: Compositions and methods for making the same and uses of the composition are provided where the composition has a plurality of dsRNA fragments with overlapping sequences, each fragment having a size in the range of 18-30 nt, such that the composition is formed by enzymatic digestion of one or more large dsRNAs and less than 2nM of the composition is capable of specifically silencing expression of a target gene by at least 65% in transfected COS cells.



WO 2005/079299 A3